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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,795	02/28/2002	Jonathan Foote	FXPL-1033US0 MCF/SRB	8973

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EXAMINER

DALAKIS, MICHAEL

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 08/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/086,795	Applicant(s) FOOTE ET AL.	
	Examiner Michael Dalakis	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1 and 3 are objected to because of the following informalities: the claims must end with a period. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 18, 19 and 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Alexander (US Patent No. 6,067,126). Alexander discloses a method and apparatus for editing a video recording with audio selections. The method includes receiving an audio and video signal, detecting transition points in the audio and video signals, aligning the audio and video signals in time, editing the aligned video signal and then merging the aligned video signal with the audio signal. (Column 3, lines 1-19, for example.) The transition points are necessarily detected to form segments of the video and audio signals for time alignment. Thus, the transition points in the video and audio signals define the beginning and ending boundaries of the video and audio segments, giving the segments a “length” in terms of time. (Column 5, lines 11-29, for example.) The video segments may be selected and/or truncated after evaluation for suitability to the audio files to match the audio segments in length by modifying the boundaries of the video

Art Unit: 2851

segments (column 5, lines 1-10). The tempo of the audio file may also be used to align the video segments to the audio segments (column 8, lines 26-31) and the volume of the audio signal may be reduced in volume so as not to smother the existing "second" audio file (column 6, line 58 through column 7, line 11). Finally, the method of Alexander includes a processor 702 receiving instructions to control the apparatus via dynamic programming control (shown, for example, in Figure 7).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander in view of either "Automatic Audio Segmentation Using a Measure of Audio Novelty" by Foote or "Scene Boundary Detection via Video Self-Similarity Analysis" by Cooper et al. as prior art acknowledged by the Applicant. Alexander discloses all that is claimed except for the features explicitly recited in the above-referenced claims. Both of the aforementioned publications to Foote and Cooper et al. disclose detecting transition points in audio and/or video signals by parameterizing the signals to form corresponding sets of feature vectors and evaluating the vectors to determine the location of the transition points. Both publication also teach including a histogram or a frequency domain transform as a part of the parameterization and performing the evaluation by determining a difference between adjacent vectors, comparing

Art Unit: 2851

the time period between a previous transition and a feature vector to determine the transition location or an accumulated difference between a plurality of vectors. Finally, the publications also teach constructing a self-similarity matrix based upon a distance matrix for a set of feature vectors and extracting structure from the matrix via a kernel correlation, where the width of the kernel can determine the duration of the transitions. The distance metric may be either the Euclidian distance between the vectors, the cosine of the angle between the vectors, or the Karhunen-Loeve distance (via principal component analysis).

It would have been obvious to one of ordinary skill in the art to incorporate the various well-known methods of parameterizing the audio and video signals to form corresponding sets of feature vectors and subsequent well-known methods of evaluation of the vectors to determine the locations of the transitions in the signals as taught by the publications of Foote and Cooper et al. into the method of Alexander for the purpose of providing an efficient and simple means for editing a video recording with audio selections.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Dalakis whose telephone number is 703.305.4021. The examiner can normally be reached on Monday-Thursday.


Art Unit: 2851

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.872.9317.

MD

August 25, 2003


Russell E. Adams
SUPERVISORY ENGINEER
TECHNOLOGY